

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

By the foregoing amendment, the specification and claims 7, 8, 14 and 15 have been amended. No new matter has been added by the amendments to the specification and claims. Thus, claims 1-19 are currently pending in the application and subject to examination.

Amendment to the Specification

The specification has been amended to correct a typographical error therein at the paragraph beginning at line 16 of page 7 and ending at line 24 of page 7. Specifically, the specification has been amended to correct the reference numeral associated with the light receiving area from numeral "6" to numeral -- 2 --.

Informal Matters

Rejections Under 35 U.S.C. § 112, Second Paragraph

In the Office Action mailed July 20, 2007, claims 7, 8, 14 and 15 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 7, 8, 14 and 15 have been amended responsive to this rejection. If any additional amendment is necessary to overcome the rejection, the Examiner is requested to contact the Applicant's undersigned representative.

Rejections Under 35 U.S.C. § 112, First Paragraph

Claim 17 and 18 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. In making this rejection, the Office Action asserts that the specification does not disclose a horizontal address decoder that

decodes a horizontal address of both the photo electric conversion elements and the non-volatile memory units. See *Office Action*, page 5. The Applicant respectfully traverses this rejection at least because claim 17 does not recite a horizontal data register.

Regarding this rejection of claim 18, the Applicant notes that the specification describes, at least at page 7, lines 11–24 (for example), that digital signals corresponding to the image signals at each row are stored in the data register 4 and are thereafter stored in the non-volatile memory 6, the digital image data may be stored in the non-volatile memory area 6 at rows and columns corresponding to those of the light receiving area 2, and analog signals of one pixel row in the light receiving area [2] are processed (A/D converted) for respective pixels to obtain parallel digital data of $N \times m$ bits, which are stored in parallel via the data register 4 into the memory cells corresponding to one row in the non-volatile area 6.

Thus, in order for each “address” of the rows and columns of the light receiving area 2, comprised of an array of photoelectric conversion elements to be mapped onto the non-volatile memory unit 6, via the horizontal register 4, the horizontal register 4 necessarily decodes the addresses of both the photoelectric conversion elements and the non-volatile memory units. The Applicant respectfully traverses this rejection of claim 18 for at least this reason.

Rejections Under 35 U.S.C. § 103

In the outstanding Office Action, claims 1-8 and 14-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,573,936 to Morris et al. (hereinafter, “Morris”), in view of U.S. Patent No. 6,282,145 to Tran et al. (hereinafter, “Tran”). Claims 9-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable

over Morris in view of Tran and further in view of U.S. Patent No. 6,556,475 to Yamazaki et al. (hereinafter, "Yamazaki"). It is noted that claims 7, 8, 14 and 15 have been amended. To the extent that the rejections remain applicable to the claims currently pending, the Applicant hereby traverses the rejections, as follows.

In order for the Examiner to establish a prima facie case for obviousness, three (3) criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to those of ordinary skill in the art, to modify the primary reference as the Examiner proposes. Second, there must be a reasonable expectation of success in connection with the Examiner's proposed combination of the references. And third, the prior art references must disclose or suggest all of the claim limitations. MPEP 2143 (emphasis added.) The Applicant submits that the Examiner fails to satisfy his burden of establishing a prima facie case for obviousness at least because the Examiner fails to show any suggestion or motivation to modify the primary reference as the Examiner proposes and further, the Examiner fails to show any reasonable expectation of success in connection with the Examiner's proposed combination of the references.

The memory array of Morris, as cited by the Examiner, is a work memory (DRAM), which performs spatial rotation of 8x8 image data in block-column by switching matrix and performing pixel operation, such as object correction and interpolation (col. 7, lines 20-30). The operation result is supplied to outside the chip before the next block is supplied, and the operational results are recorded in off-chip memory 180. See Morris, col. 7, lines 20-30.

The structure taught by Morris, as cited, requires a high speed read/write work memory. The clock speed for reading image data of Morris cannot be freely altered, and therefore power dissipation also cannot be reduced in Morris.

Tran, as cited by the Examiner, simply discloses a non-volatile memory of multi-pixel level recording, which may be used in the memory medium outside the sensor. The non-volatile memory of Tran is low speed in data writing and erasing.

Neither Tran nor Morris discloses or suggests any reason or motivation to replace the high speed memory device of Morris with the low speed non-volatile memory device of Tran. Moreover, replacing the high speed memory device of Morris with the non-volatile memory device taught by Tran, which is low speed in data writing and erasing, would render the device of Morris, which requires a high speed read/write work memory, unfit for its intended purpose.

Section 2143.01 V of the MPEP states:

THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

If [the] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Accordingly, the Applicant submits that the combination of Morris and Tran, as suggested by the Examiner in the outstanding Office Action, as well as any rejections based on such combination, are improper, and withdrawal of such rejections is requested.

For at least this reason, the Applicant submits that claim 1 is allowable over the applied art of record. As claim 1 is allowable, the Applicant submits that claims 2-19,

which depend from allowable claim 1, are likewise allowable for at least the reasons set forth above with respect to claim 1.

Conclusion

For all of the above reasons, it is respectfully submitted that the claims now pending patentability distinguish the present invention from the cited references. Accordingly, reconsideration and withdrawal of the outstanding rejections and an issuance of a Notice of Allowance are earnestly solicited.

Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is invited to contact the undersigned representative at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of time. The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with this communication to Deposit Account No. 01-2300 referencing client matter number

107317-00060.

Respectfully submitted,

Arent Fox, LLP


 Michele L. Connell Reg. No. 4,1668
Registration No. 52,763

Customer No. 004372
1050 Connecticut Ave., N.W.
Suite 400
Washington, D.C. 20036-5339
Telephone No. (202) 857-6104; Facsimile No. (202) 857-6395

Enclosures: Petition for Extension of Time